On Nominative Case Assignment and a Few Related Things**

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1.   Modern Greek

1.1

In Modern Greek (MG) subjects of embedded clauses can stand either in the nominative or accusative case. The assignment of nominative case in indicative tensed clauses introduced by the indicative comp *oti/pos* is fairly straightforward: we can consider it assigned by an INFL which is [+T(ense)] and [+A(greement)]. Nom case can also be assigned to the subjects of some *na*-clauses[1], I will return to these very soon.

Accusative case is assigned to embedded subjects in ECM constructions and here the data become interesting. One would expect the embedded verb in such cases to be infinitival. However, MG lacks embedded infinitival complements. By this I mean that it lacks sentential complements whose verbs can be characterized

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**   This paper is somewhat old; it was written in 1988 when I was a first-year student at MIT. It was meant to be included in *MITWPL* 10, but LATEX daemons were much less cooperative in those days and it ended up circulating and cited as a (1988) manuscript (section 1.6 is partly included in a 1990 squib in *Linguistic Inquiry*, entitled 'The Past, The Possible, and The Evident'). I have changed nothing from that original version, which means that the reader will recognize that we have more sophisticated tests and ideas for some of the things discussed in it, but parts of it are topical still (or maybe *again*) given its focus on Agreement and Case and the relationship between them.

1   The status of the particle *na* is unclear. I will not touch upon it in the present paper. I agree with Ingria (1981 and p.c.) that it is probably a modality marker and not a complementizer. As will be obvious from the main text, subjects of *na*-clauses can be either Nominative or Accusative and the verb following it either tensed or tenseless. So *na* doesn't seem to have any bearing on the present topic.

as being [-T] and [-A]. All embedded verbs are [+A]; they agree with their subject in person and number.

Compare sentences (1)-(3) where the higher verb assigns accusative to the embedded subject with sentences (4)-(6) where the embedded subject is assigned nom case. Note that in all sentences the embedded verb agrees with its subject:

1.   vlepo ton Kosta na tiganizi psaria
        see DET Kosta/ACC fries   fish
        'I see Kostas fry fish'

2.   vazo ton Kosta na   tiganizi psaria
        put DET Kosta/ACC fries   fish
        'I am making Kostas fry fish'

3.   fandazome ton Kosta na   tiganizi psaria
        imagine DET Kosta/ACC fries   fish
        'I imagine Kostas frying fish'

4.   elpizo o   Kosta na   tiganizi psaria
        hope DET Kostas/NOM fries   fish
        'I hope Kostas fries fish'

5.   ine dhination o Kostas na tiganizi psaria?
        is possible DET Kostas/NOM fires fish
        'Is it possible that Kostas fries fish?'

6.   provlepo o Kostas na tiganizi psaria
        predict DET Kostas/NOM fries fish
        'I predict that Kostas is frying fish'

If the subject *Kostas* were to be replaced by *ta pedhia* ('the children') the embedded verb would appear in the third person plural form *tiganizun*; if the subject were 'you'-plural, the form of the verb would be *tiganizete*. This holds for all of the sentences in (1)-(6). Thus, even though INFL in (1)-(3) cannot assign nominative to its subject, it is clear from the morphology that it does contain the feature [+A]. This begins to shed doubts on the possibility of [+A] being the assigner of nom case in MG.

Another possible nom case assigner is [+T]. In order to test this, we can try substituting the embedded verb in (1)-(6) with its equivalent in the past tense *tiganise*, keeping everything else in the sentence unchanged. The argument, then, is that if a sentence with an embedded past tense is grammatical, the subordinate clause has its own tense-domain and its INFL is therefore [+T]. If a sentence with an embedded past tense is ungrammatical, the subordinate INFL is [-T].

Doing this past tense substitution, a very clear pattern arises: sentences (1)-(3) become ungrammatical, while sentences (4)-(6) remain grammatical. In fact, a past tense on the embedded verb renders (1)-(3) ungrammatical even if the matrix verb is in the past tense:

1'.   *   idha/vlepo ton Kosta na tighanize psaria
            (I) saw/see Kosta/ACC fried fish

2'.   *   evala/vazo ton Kosta na tiganize psaria
            (I) made/make Kosta/ACC fried fish

3'.   *   fandastika/fandazome ton Kosta na tiganize psaria
            (I) imagined/imagine Kosta/ACC fried fish

This means that the embedded INFL in (1)-(3) is [-T]. In (4)-(6), however, it is [+T] since Past Tense substitution yields grammatical sentences:

4'.   elpizo o Kostas na tiganise psaria
        hope Kostas/NOM fried/3/SING/PAST fish
        'I hope Kostas fried fish'

5'   ine dhinaton o Kostas na tiganise psaria?
        is possible Kostas/NOM fired/3/SING/PAST fish
        'Is it possible that Kostas fried fish?'

6'   provlepo o Kostas na tiganise psaria
        predict Kostas/NOM fried/3/SING/PAST fish
        'I predict that Kostas has fried fish'

We see, then, a correlation between the [+T] feature and nominative case.

1.2

We saw above that when the subject of an embedded *na*-clause has Nominative Case, the embedded verb will be [+T] which can be seen by its ability to appear in the past tense. When the embedded subject has Accusative, the embedded verb cannot vary for Tense and the embedded INFL should be described as being [-T]. We can temporarily conclude that in MG [+T] assigns Nominative Case. Unfortunately, the pattern gets confused by two factors.

MG is a subject *pro*-drop language. Sentences (4)-(6) can appear without an overt embedded subject:

7.(=4) elpizo na tiganizi psaria
        hope   fries   fish
        'I hope (s)he fries fish.'

Since *pro*-drop is not possible in Accusative assigned positions in MG, the equivalent of (7) for (1)-(3) is ungrammatical. If the agent of the embedded verb is a pronoun, this will appear as an object clitic on the higher verb:

8.(=1) ton vlepo na tiganizi psaria
        him see   fries   fish
        'I see him fry fish'

Moreover, embedded accusative subjects appear only in a subset of instances of [-T], namely, in those cases where the higher verb permits ECM. It is, of course, possible that an embedded INFL is [-T] and ECM is excluded. In those cases the lack of the Nominative vs. Accusative distinction on an embedded subject partly obscures the argument. These environments divide into two classes. The first class involves verbs like the English *try*, which take infinitival complements and which are always subject control verbs. The second class will be discussed in section 1.3.

In the first class of verbs, as in the English *try*, the subject of the lower verb is always understood as being coreferential with the matrix subject. Also in those cases does the embedded verb have person and number morphology in MG. The agreement, of course, is always with the higher subject:

9.   ksero na kolimbao
     know/1/SING swim/1/SING
     'I know how to swim'

10. tha prospathisi an erthi
     will tries/3/SING comes/3/SING
     'He will try to come'

11. irthate na parete   ta pragmata sas?
     come/2/PL take/2/PL the things your/PL
     'Did you/PL come to get your things?'

The same pattern, i.e. obligatory subject control and lack of an NP-object of the higher verb, appears with some adjectives:

12. imaste ipochreomeni /etimi na figume
     are/1/PL obliged/PL/ ready/PL leave/1/PL
     'We are obliged/ready to leave'

and with some nouns:

13. iche tin kalosini na fighi
     had/3/SING the kindness leaves/3/SING
     'He had the kindness to leave.'

14. ekane   to lathos   na figi
     made/3/SING the mistake leaves/3/SING
     'He made the mistake to leave'

The pattern in (9)-(14) is the same. In all sentences the embedded verb is [+A] and the agreement is with the higher subject. If I was right above, the lack of (Nominative) Case assignment means that the embedded INFL is [-T].

This is, in fact, borne out because none of the embedded predicates in (9)-(14) can appear in the past tense. For example:

13'. * echi/iche   tin kalosini   na efige
         has/had/3/SING the kindness left/3/SING/PAST

The embedded subject in these sentences, then, must be some type of base-generated EC: *pro* or PRO. Claiming that it is *pro* would put these subjects on the same level with the EC subject in sentences like (7), *pro* in matrix sentences and *pro* in embedded clauses introduced by the indicative complementizer. In all of these cases, *pro* is the subject of a clause whose INFL is [+A] and [+T] and it can alternate with an overt Nominative subject. In addition, whenever *pro* is possible in MG is does not have to corefer with an NP in the sentence. The obligatory coreference of the embedded EC subject of (9)-(14) with the higher subject and the impossibility for a Nominative subject argue against claiming it to be *pro*.

Postulating PRO as the embedded subject in (9)-(14) would automatically solve the problem of its differentiation from *pro* and of its obligatory coreference. But it would have another consequence as well. In a number of analyses, PRO is not supposed to be governed. If PRO is the embedded subject of (9)-(14), it will be governed by an INFL which is [+A]. We could modify the requirements for PRO by saying that it should not be governed by [+T] (in MG.) There are two ways to interpret this:

15. a. PRO should not be governed by a Case-assigning element, [+T]
        being the Nominative Case assigner in MG.

This amounts to saying that it is Case, not government, that determines the distribution of PRO (Bouchard 1984 and Hornstein and Lightfoot 1987 also have Case as the relevant constraint for PRO.) This means that in languages where, unlike MG, Nominative is assigned by [+A], PRO can be governed by [+T] but should not be governed by [+A].

15. b. PRO should not be governed by [+T], whatever the assigner of
        Nominative Case is in the language.

A language like MG, where [+T] assigns Nominative Case, cannot help us decide between (15a) and (15b). And in a language where [+A] is the case assigner, the combinations [+A][+T] and [-A][-T] will not be telling either. The

decision can only be made through languages with verbal forms which are [-A][+T] and [+A][-T]. So, with [+A] assigning Nominative and under interpretation (15a), we expect

[-A][+T]:   PRO
[+A][-T]:   *PRO

Under interpretation (15b) we expect:

[-A][+T]:   *PRO
[+A][-T]:   PRO

Unfortunately, I do not know of any languages which permit the combination of features [+T][-A]. So at this point the only relevant data that I can use involve the combination [-T][+A] , in a language where nominative is assigned by [+A]. Such a language is Catalan, which according to Picallo (1984) has the combination [-T][+A] in the subjunctive. If we look at Catalan, we see that PRO cannot appear as subject of a verb in the subjunctive:

16.   vols   que els nens/ells/EC   mengin patates
         want/2/SING that the children/they/NOM eat potatoes
         'You want that the children/they eat potatoes.'

The fact that *els nens* and *ells* can appear and in the Nominative indicates that the EC-subject must be *pro*, not PRO. Moreover, the fact that *mengin* has different person and number morphology from *vols* indicates that its (EC-)subject does not have to corefer inside the sentence; one more argument against PRO and in favour of *pro*. Since PRO does not appear in the combination [-T][+A] in Catalan, interpretation (15a) seems to prevail over (15h). So saying that PRO cannot be governed by whatever the Case assigning element of the language is, is consistent with MG and Catalan. Similarly, Raposo (1987) claiming that the Nominative Case assigner in European Portuguese is [+A], names the EC subject of inflected infinitives ([-T][+A]) *pro*, not PRO. Evidence from so few languages is, of course, not conclusive but in the absence of more relevant data I will leave the question open, giving (15a) a slight advantage over (15b).

1.3.

The second class of verbs with an embedded [-T] INFL and where no ECM for the embedded subject is possible involves verbs which subcategorize for NP S: *pitho*-'persuade', *iposchome*-'promise', *lego*-'tell'. The standard analysis would be to say that these verbs show subject or object control. However, in MG the embedded INFL is still [+A] and the embedded verb agrees in person and number with the matrix subject in case of subject control ((17)) or with the matrix object in case of object control ((18)):

17.   iposchethika ston Kosta na dhiavaso afto to vivlio
         promised/1/SING to Kosta read/1/SING this book
         'I promised Kosta to read this book'

18.   episa ton Kosta na dhiavasi afto to vivlio
         persuaded/1/SING kosta/ACC reads/3/SING this book
         'I persuaded Kosta to read this book'

As in aforementioned cases, the embedded INFL is [+A], yet [-T] as can be tested by the unacceptability of the past tense on the embedded verb. As we saw before, a [-T] INFL is consistent with the inability to take a nominative subject, but in cases like (17)-(18), there is no source for accusative on the subject. One could claim, then, that the embedded EC-subjects are PRO.

At this point it is only fair to mention that it is not easy to distinguish object control verbs whose subcategorization frame is portrayed in (20) from those permitting ECM and whose subcategorization frame is as in (21), if the linear order is as in (19). The index refers to person and number agreement:

19.   ...V NP$_i$/ACC V$_i$
20.   V [NP] [PRO VP]
21.   V [IP]

In other words, it is not easy to determine if and when ECM applies in MG. (18) and the verb *lego*-'tell' are probably best represented as in (20). Cases like (1) (perception verbs) and (2) (causatives) are probably like (21). (3), on the other hand, is less clear.[2] For the present purpose, however, it isn't necessary to determine unambiguously whether a certain verb subcategorizes like in (14) or (15)[wrong numbers- dse] In either case, the embedded INFL which is [-T][+A] cannot assign Nominative Case.[3]

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[2]   Some additional verbs that appear in structures like (13) and that are ambiguous between (14) and (15) are: *parakolutho, afino, epitrepo, apagorevo, embodhizo, simbulevo, dhidhasko (pos), dhiatazo, dhichno, thimame.*

[3]   There are some verbs which appear as in (19), yet can marginally take an embedded Nominative subject *only if* the latter appears postposed:

i.   *   iposchethika/ipa ston Kosta o yos tu na fighi
         promised/told to Kosta the son/NOM his leaves
ii.   iposchethika/ipa ston Kosta na fighi o yos tu
         promised/told to Kosta leaves the son his
         'I promised/told Kostas that his son would leave'

Although (ii) is slightly odd for pragmatic reasons, there is a strong contrast between (i) and (ii).

1.4

One final argument in favour of the correlation of Nominative Case and Tense variation that can be analyzed as [+T] being the Nominative Case assigner comes from some verbs that can be followed by either an Accusative or Nominative embedded subject:

22.(=3)   fandazome ton Kosta na tiganizi psaria
           imagine Kosta/ACC fries/3/SING fish

23.   fandazome o Kostas na tiganizi psaria
           imagine Kostas/NOM fries/3/SING fish

There is a difference in meaning between (22) and (23). The former is best translated as 'I imagine Kostas frying fish', in the sense of visualizing him at it. On the other had, (23) is best translated as 'I imagine Kostas fries fish', in the sense of considering it likely that he does so.

If I am right, the embedded INFL in (22) must be [-T] while that of (23) [+T]. This in fact seems to be the case because past tense is acceptable only in (23):

22'.   *   fandazome ton Kosta na ekleye/3/SING/PAST
23'.   fandazome o Kostas na ekleye

A similar contrast exists between (iii) and (iv). The verbs in question are always followed by an accusative NP as in (13), yet can marginally take a nominative postposed subject:

iii.   *   evala/parakolutho/epitrepo/apagorevo o Kostas na tiganizi psaria
iv.   evala/parakolutho/epitrepo/apagorevo na tiganizi psaria o Kostas.
             (I) made/observe/permit/forbitd fries fish Kostas/NOM

As mentioned, (ii) and (iv) are marginal. Moreover the obligatory postposition of the subject is even more striking because freedom of word order (probably some sort of A'-movement/ I don't know yet) is very productive in MG. In fact S, V and O can appear in all six possible combinations.

The third problem with these sentences is that, while the embedded subject is Nominative, the embedded verb cannot vary for Tense. This might seem to contradict my analysis of Nominative Case and Tense variation co-occurring due to [+T]. However, the marginality of the sentences in question in combination with the obligatory precedence of the verb w.r.t the subject might point to some additional mechanism of Nominative Case assignment, perhaps along the lines of Raposo (1987) for European Portuguese and Rizzi (1982), Burzio (1986) for Italian.

Summarizing, we have seen that an INFL which is [+A] and [-T] cannot assign nominative case, while an INFL which is [+A] and [+T] does assign nominative case.[4]

1.5

Philippaki-Warburton (1987) claims that MG lacks the category PRO. Her argumentation relies on the assumption that PRO should be ungoverned and that MG "...has no infinitive and consequently all clauses, main and subordinate, are finite." (pg. 291). First of all, PRO can be governed under a number of analyses (Koster 1983, Bouchard 1984, Manzini, Borer 1987 and others.) Second, I find her use of the term 'infinitive' vs. 'finite' rather misleading. Since the AGR and Tense features have been dissociated (Chomsky 1981, Picallo 1984, and more recently Pollock 1987 and Belletti 1987 to name a few) and the possibilities for [+T][-A] and [-T][+A] exist, the term 'infinitival' has become a concealing cover term. Which of the latter combinations of features can be characterized as infinitival and how can they be distinguished from the uncontroversially 'infinitival' [-T][-A]? The deduction that MG lacks infinitivals from the fact that all embedded verbs are [+A] does not seem to be contentful.

Although Philippaki-Warburton doesn't discuss the relevant cases, there are verbal forms in MG that are [-T][-A]:

24.   o Kostas perpatuse sfirizondas
           Kostas walked/3/SING whistling

25.   dhiaschizondas ton dhromo idha to aftokinito tu Kosta
           crossing the street saw the car Kosta/GEN
           'Crossing the street, I saw Kostas's car.'

The forms *sfirizondas* and *dhiaschizondas* have no inflection for person, number, or tense. They are equivalent to the English gerunds, which are also clausal (cf. Reuland 1983 and others.) Since these forms are [-T][-A], their subjects would be PRO, also under P-W's argumentation. So, even for P-W, the category PRO should exist in at least one environment in MG (see sections 1.3 and 1.4 for more environments which can be analyzed as containing PRO.)

I analyzed cases described in section 1.4 as involving PRO and P-W does discuss some of those. She specifically discusses (26) and (27) (her (1) and (2)):

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4   Some more verbs that subcategorize for a *na*-clause which is [+T][+A] and thus appear with embedded nominative subject, are *thelo, protimo, pistevo, leo, efchome, thimame*. Also the 'impersonal'/predicates of propositions *ine dhinaton, prepi, bori*.

26.   o Janis prospathise [EC na fiji]
        John/NOM tried/3/SING leaves/3/SING
        'John tried to leave'

27.   dhen ine fanero [ti [EC na kani]]
        NEG is obvious what does/3/SING
        'It is not clear what he should do.'

First of all she excludes EC from being PRO because it is governed "...by the finiteness of the clause" (p. 292) but we've already discussed this. In addition, she claims that analyzing (26) as a case of control (EC and matrix subject have to be coreferent) would cause problems for (27) because there the EC is not coreferent to the (expletive) matrix subject and "if PRO was the appropriate analysis of the missing subject in [26], it would also have to be appropriate for [27]" (p. 292). I agree with her that EC in (27) cannot be PRO, but must be *pro*; this follows from the present analysis since the EC can alternate with a Nominative subject and the embedded verb can appear in the Past Tense (see section 1.6 for a discussion of 'impersonal' predicates.) But how does it follow that therefore, EC cannot be PRO in (26) either? Why should the two ECs be necessarily of the same category?

Philippaki-Warburton also claims that NP-trace exists in MG only in passive sentences:

28.(P-W's 5)i Maria plighothike e
        Mary/NOM hurt/PASS
        'Mary was hurt.'

She may be right about (28), although it is not obvious to me that the ability to express meanings like (28) entails the existence of NP-traces. It does seem, however, that MG can be analyzed as having NP movement in raising predicates. I agree with her that (29) and (30) (her (6) and (7)) are not instances of raising:

29.   o Janis ine siguro   pos tha figi
        John/NOM is scertain/3/SING/NEUTR COMP will leave/3/SING
        'John, it is certain that he will leave.'

30.   o Janis ine siguros   pos tha figi
        John/NOM is certain/3/SING/MASC COMP will leave
        'John is sure that he will leave.'

(29) should be analyzed as A'-movement of *Janis* in front of an impersonal predicate. The subject of *ine siguro* is *pro*(expl) (see section 1.6.) In (30) the predicate *ine siguros*, as P-W points out, assigns a theta-role to its subject and the embedded subject is referential *pro*, which can but does not have to corefer with the matrix subject. So (30) cannot be analyzed as raising either.

Consider the verb *fenete*, 'seem'. This does not have to agree in person and number with its apparent subject:

31.   ta pedhia fenete oti agapun tin Maria
        the children seem/3/SING COMP love/3/PLU Mary/ACC
        'It seems that the children love Mary.'

Due to lack of verbal agreement, one should probably analyze (31) as another example of A'-movement. The subject of *fenete* is *pro*(expl) and the EC subject of *agapun* the variable left by the A'-movement of *ta pedhia*.

But there are cases where *fenete* does agree in person and number with its subject:

32.   ta pedhia fenonde na agapun tin Maria/arosta
        the children seem/3/PLU love/3/PLU Mary/ACC /sick/NEUTR/PLU
        'The children seem to love Mary'/'The children seem sick.'

It is clear that *ta pedhia* stands in the subject position of *fenonde*. But is it base-generated there or is it moved there? If it is base-generated there, we would have to claim that *fenonde* in (32) assigns a theta-role to its subject. In such a case, the embedded EC subject should be *pro* or PRO. It cannot be *pro* because the subject of *agapun* can only be the matrix subject, no overt subject can appear (so no NOM Case is assigned to the position in question) and the embedded verb cannot appear in the past tense:

33.   *   ta pedhia fenonde na agapusan tin Maria
                                 PAST

So the embedded subject in (32) cannot be *pro*. If, then, *ta pedhia* is base-generated in matrix subject position, the embedded EC subject can only be PRO. However, one could also claim that *fenonde* does not assign a theta-role to its subject and that *ta pedhia* is moved to matrix subject position to get Case, because, as we have already seen, the embedded subject position in (32) cannot be assigned Case. Under this analysis, the EC subject of *agapun* is NP-trace. I prefer the latter analysis to the one claiming the existence of PRO in (32) and *fenonde* as a theta-role assigner. If this is correct, then MG does have instances of raising, unlike the analysis of P-W.

1.6   More PROs

Having established the existence of the category PRO in MG, we will see that there is sufficient evidence to conclude that, at least in MG, modals are main verbs subcategorizing for an IP.

The modal *bor-* (stem) means 'have the ability' in its root reading and 'is possible' in its epistemic reading. In its root meaning, it can inflect for all persons and both numbers: *boro, boris, bori, borume, borite, borun*. However,

in its epistemic use it can appear only in the form of the third person singular *bori*. This is predictable since then it functions as a 'predicate of propositions' (cf. Higginbotham 1987). In such cases, the subject is expletive *pro*:

34.   bori   ta pedhia   na figun
         is possible/3/SING the children leave/3/PLU
         'It is possible that the children (will) leave.'

In its epistemic use, *bori* subcategorizes for a tensed clause as can be seen from the fact that the embedded verb can appear in the past tense and the lower subject appears in the nominative:

35.   bori afti na efigan
         is possible they/NOM leave/3/PLU/PAST
         'It is possible that they left.'

All of the above implies that when the lower subject does not appear overtly, it is *pro*:

36. a.   bori na efigan
         is possible/3/SING leave/3/PLU/PAST
         'It is possible that they left.'

    b.   bori [IP*pro* na efigan]

As already mentioned, there is some sort of A'-movement/topicalization in MG that can move a constituent from the embedded clause to the front of the sentence. That it is A-bar movement and not A-movement can be seen from the fact that the matrix verb does not agree in person or number with the moved element (37) and from the fact that the embedded object can undergo this movement as well (38):

37.   ta pedhia bori na efigan
         the children is possible/3/SING leave/3/PLU/PAST
         'It is possible that the children left.'

38.   tin Maria bori o Kostas na agapuse
         Mary/ACC is possible Kostas/NOM love/3/SING/PAST
         'It is possible that Kostas loved Mary' (emphasis on *Mary*)

In its root meaning, the modal can appear in any inflected form, as mentioned, but the lower verb *also* agrees in person and number with the subject of the sentence:

39. a.   boro na kolimbiso
         can/1/SING swim/1/SING
         'I am able to swim.'

    b.   boris na kolimbisis
         can/2/SING swim/2/SING
         'You are able to swim.'
    etc.

When the subject is overt it appears in the nominative and it can appear either in front of the modal (40) or between the modal and the verb (41):[5]

40.   ta pedhia borun na kolimbisun
         the children can/3/PLU swim/3/PLU
         'The children are able to swim.'

41.   borun ta pedhia na kolimbisun
         can/3/PLU the children swim/3/PLU
         'The children are able to swim.'

It may at first sight be unclear whether it is (40) or (41) that represents the order of constituents at D-structure. I will claim that it is (40) and that (41) is the result of scrambling for the following reasons. If (41) were the underlying order, then (40) would be the result of scrambling or of NP-movement. It is clear that *ta pedhia* stands in the [NP,IP] position in (40) since the verb agrees with it in number and person. so scrambling cannot have derived (40) from (41). The remaining possibility to maintain (41) as the underlying order is to say that *ta pedhia* is raised from the subject position of *kolimbusan* to the subject position of the matrix verb in order to get Case there (NP movement.) This implies that the lower INFL cannot assign Case to its subject, in other words and following what I have claimed in previous sections, the lower INFL should be [-T]. This is in fact so, since the lower verb cannot appear in the past tense (in either (40) or (41)):

40'.   *   ta pedhia borun na kolimbusan
                                    PAST

41'.   *   borun ta pedhia na kolimbusan
                                    PAST

So, since the embedded verb is [-T] and can therefore not assign Case to its subject, it is possible to claim that (40) derives from (41) after NP-movement. But this is not correct. If the D-structure were as in (41), then the subject position of the matrix verb should not be assigned a theta-role, otherwise the

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[5]   It is also possible for the subject to appear after the lower verb:

i.   borun na kolibisun ta pedhia

Unlike (40) or (41) however, it is clear that (i) is the result of scrambling, SVO being the basic word-order for MG.

theta-criterion would be violated by movement into that position. If *ta pedhia* is indeed generated as subject of the lower verb, then (40') would be the result of NP-movement to the matrix position. (41) would subsequently be derived from applying scrambling to (40). If this is correct, then the structure of (41) should be as in (42):

42.   t' borusan ta pedhia t na kolimbusan

Abstracting away from what exactly the A' position of *ta pedhia* is (adjoined to IP?), *t* is the NP-trace of subject raising and *t'* is a variable, the trace of A'-movement of *ta pedhia*. (42) seems to be the only way to maintain that (40) does not represent the underlying order. This whole account crucially relies on *borusan* not assigning any theta-role to its subject, because if it did, there could be no movement to the matrix [NP,IP].

But is it plausible that the modal in its root meaning does not assign a theta-role? If yes, then what is the difference between its root and its epistemic reading if both take expletive subjects? In MG the only difference would be that the epistemic instantiation subcategorizes for a tensed clause as we saw in (35)-(36), while in the root reading the modal takes a tenseless clause (40')-(41'). This somehow doesn't appear to be a sufficient difference since the root meaning predicates of the subject (ability), unlike the epistemic which predicates of the whole proposition. However, other than this intuition, there may be a couple of tests that might prove that *boro* in its root reading assigns a theta-role to its subject. If *boro* never assigns a theta-role then (44) (as an answer to (43)) would not be possible:

43.   pios bori na kolimbisi apenandi?
             who can swim the other side
             'Who can swim to the other side?'

44. a.   ego boro
             I/NOM can/1/SING

    b.   esi boris
             you/NOM/SING can/2/SING
    etc.

The acceptability of the answers under (44) would indicate that *boro* does assign a theta-role to its subject. Notice that you cannot get the equivalent with the epistemic (45) or (46):

45.   *   ti bori?
             what is possible
             'What is possible?'

46.   *   afto bori
             this is possible

The root *boro*, then, does seem to assign a theta-role to its subject. As a result (42) cannot be a correct structure and (41) cannot represent the order of constituents at D-structure.

The remaining possibility is that (40) represents the order of constituents at D-structure. Now we have to decide between (47) and (48) as the structure of (40), i.e. we have to decide whether *boro* is a main or an auxiliary verb:

47.   ta pedhia borun [$_{IP}$ PRO n kolimbisun]
48.   ta pedhia borun [$_{VP}$ na kolimbisun]

The correct structure is probably (47). Since both *borun* and *kolimbisun* show person and number agreement, one might want to claim that each is preceded by an AGR node. It would be difficult to claim that one AGR node in the sentence is sufficient to give person and number morphology to two verbs. When the aspectual verb *echo* combines with a verb, there is no agreement on the participle:

49. a.   echo fai
             have/1/SING eaten
             'I have eaten.'

    b.   echis fai
             have/1/SING eaten
    etc.

(49) follows if no AGR node intervenes between the aspectual verb and the participle. The inflection on both verbs as in (40) argues in favour of an additional AGR node, i.e. for (47).

If we analyze (49) as a case where no AGR node intervenes between the two verbs, we have another way to distinguish (40) from sentences like (49). Clitic climbing is very restricted in MG. If there is a clitic object in (49), the sentence will be as in (50a), not (50b):

50. a.   to echo fai
             CL have eaten
    b.   *   echo to fai

Contrast (50) with (51), where the clitic cannot leave the lower verb:

51. a.   boro na to grapso
             can/1/SING CL write/1/SING
             'I can write it.'

    b.   *   to boro na grapso

The unacceptability of (51b) might be another indication that the lower verb in (40) and (51a) is in a clause by itself, which the clitic cannot leave.

A third argument in favour of (47) and against (48) comes from the fact that unlike the aspectual verb, the modal can be scrambled away from the lower verb:

52.   na to grapso boro
         CL write/1/SING can/1/SING
         'Write it, I can.'

53.   * fai echo
          eaten have/1/SING

(52) would follow if the modal and the verb are in different maximal projections. I will not go into when scrambling is excluded, since that would take us too far afield.

Another fact that argues in favour of (47) is that the modal and the lower verb can be separated by negation, unlike the aspectual verb and the participle:

53.   boro na min pao scholio simera?
         can/1/SING NEG go/1/SING school today
         'Can I not go to school today?'

54.   * echo min/dhen fai
          have/1/SING NEG eaten

If negation is generated outside the VP, then (48) cannot be the right structure.

So we have at least four arguments in favour of (47) and against (48). We might add to that that the presence of *na* always indicates a clausal structure. The verb following the modal verb unlike the one following the aspectual, is always preceded by *na*. The discussion of *na*, however, is too large and outside the context of the present paper. I will hope that the first four arguments suffice to choose (47) over (48).

The modal verb in MG, then, seems to take an IP complement. The subject of the latter is always an EC coindexed with the matrix subject. This obligatory coreference seems already to point towards PRO, not *pro*, as the lower subject. The same direction is argued by the fact that the lower subject can never appear overtly, as well as by the fact that the lower verb is [-T], as we saw. We have then one more case of PRO in MG and the structure of (40) is as in (55):

55.   ta pedhia borusan [PRO na kolimbisun]
         the children can/3/PLU/PAST swim/3/PLU

Since MG is a null-subject language, a sentence containing a modal can appear with two ECs. The structure of (56a) is as in (56b):

56. a.   boro na figo
            can/1/SING leave/1/SING
            'I can leave'

    b.   *pro* boro [PRO na figo]

When the morphology on the verbs is third person singular as in (57), the sentence is ambiguous between the root ((58)) and the epistemic ((59)) meaning of the modal:

57.   bori na figi
         can/3/SING leave/3/SING
         'He can leave.' or 'It is possible that he leaves.'

58.   *pro* bori [PRO na figi]
59.   *pro*$_{expl}$ bori [*pro* na figi]

Of course when the lower verb is in the past tense, the sentence has an unambiguously epistemic meaning. This follows from everything we have said so far:

60. a.   bori na efige
            can/3/SING leave/3/SING/PAST
            'It is possible that he left.'
    b.   *pro*$_{expl}$ bori [*pro* na efige]

When the subject of the sentence is overt and third person singular, the sentence is again ambiguous between the root and the epistemic reading:

61.   o Kostas bori na figi
         'It is possible that Kostas leaves' or 'Kostas can leave'

In its root reading, the structure of (61) will be:

62.   o Kostas bori [PRO na figi]

In its epistemic reading, *Kostas* has been scrambled from the embedded subject position to the front of the sentence:

63.   o Kostas [*pro*$_{expl}$ bori [*t* na figi]]

As in (60), when the lower verb is in the past tense, the sentence can only have the epistemic reading.

1.7

Closing the section on MG, I would like to say that I realize that by determining which ECs are PRO and which aren't I leave untouched the question of what Control is (Williams 1980, Manzini 1983, Borer 1987, and many others.)

2.   Classical Greek

Let's now look at the assignment of nominative case in Classical Greek (CG). Also here, assignment of nominative case in tensed, indicative clauses is straightforward.

Unlike MG, CG does have embedded clauses whose verb does not inflect for the number and person features of its subject. In other words, INFL is [-A] in those cases. Moreover, in these constructions, the subject can only appear in the accusative case. These data would appear to correlate [-A] with the absence of nominative case. however, we cannot yet identify the feature [+A] as the one relevant for nominative case. It is possible that the aforementioned infinitival clauses contain an INFL that is [-T] in addition to being [-A]. In such a case it is impossible to determine which of the two elements under INFL is responsible for nominative case. Luckily, however, things are more interesting.

CG, like European Portuguese, can be said to contain inflected infinitives. But unlike EP, the infinitive inflects for tense and not for agreement with the subject. The tense morphology on the infinitive has more of an aspect reading than a time reading (whatever this means, exactly; this is the way CG grammars describe it- Smythe 1920, Hansen and Quinn 1987. I will return to this later.) The following sentences, then, contain embedded clauses with INFL which is [-A] (the form of the infinitival will not change with a subject of other person and number) and [+T]:

64.   Socrates egitai ton archonta ton demon paidevein
           Socrates believes DET archon/ACC the people/ACC educate
                                              (PRESENT INFINITIVE/IMPERFECT)
           'Socrates believes the archon to educate/have educated the people.'

65.   ....paidevsai   (AORIST)
66.   ....paidevsein   (FUTURE INFINITIVE)
67.   ....pepaidevkenai   (PERFECT INFINITIVE -
                                              occurred in past with effect in present)

It is possible to claim that the first interpretation of (64) involves the [-T][-A] infinitive. But the rest of the embedded clauses can be claimed to contain an INFL which is [-A] and [+T]. Since [+T][+A] assigns nominative case and since [+T][-A] cannot do this, we conclude that the element relevant for nominative case assignment in CG is [+A].

Alternatively, one could claim that the tense on the infinitives in (64)-(67) is not that element that has been claimed to make sentences tensed, but aspect. This would mean that the embedded INFLs in the above sentences are [-T][-A]. Can we in such a case make any claims about what the nominative case assigner is? In fact, we still can and it appears that, even in this light, [+A] is the element we are looking for.

The 'fake tense'/aspect element that we saw in (64)-(67) appears also in other constructions, namely the subjunctive and the optative moods. In these moods, in other words, the 'tense' morphology has only aspectual readings. This means that if the embedded clauses in (64)-(67) are claimed to be [-T], then so must the embedded clauses in the subjunctive and optative moods (see also Picallo 1984 on the subjunctive as [+A][-T].) These moods have too many uses and too rich a morphology to give exhaustive examples in the present context. Suffice it to say, however, that in all constructions in the subjunctive or optative, the verb agrees in number and person with the subject. This means that the INFLs in question are [-T][+A]. Now notice the case the subject of the subjunctive or optative appears in:

68.   foveitai mee su tavta poieses
           is afraid NEG you/NOM these things do (SUBJ. PRESENT)
           'He is afraid that you may/will do these things.'

69.   efoveito mee su tavta poieseias
           was afraid NEG you/NOM these things do (OPT. AORIST)

The embedded subjects are in the nominative case. This means that even if the aspect-reading of the tense morphology were to be read as [-T], we still arrive at the same conclusion: in CG the element relevant for case assignment is [+A].

3.   Side Points

3.1.   Parameter?

We have seen that the element that assigns nominative case is not the same cross-linguistically but is, in some sense, parametrizable. This means that the language learner has to decide what assigns nominative case in his/her language. There seem to be at least two options to choose from: [+A] and [+T]. Perhaps the phenomenon described by Raposo (1987) and Rizzi (1982) and referred to for MG in footnote 4, or, more generally Case assignment by INFL which has moved to COMP, is an option which can be chosen in addition to the aforementioned two. There doesn't seem to be anything peculiar about having more than one way to assign a certain Case. This definitely seems to happen with Accusative, Genitive, and Dative. Why should Nominative be different?

3.2. The Historical Perspective

W.r.t. the issue of parametrizability mentioned above, we cannot always determine why a language chooses for one setting over another- to the extent that it makes sense to ask this question in the first place. However, some insight might be gained by introducing the historical perspective. At some point something happened in Greek that permitted or pushed the change from [+A] to [+T] as the assigner of nominative case. What could this be? This last section of the paper attempts to speculate about this change.

The lack of embedded infinitival complements is a phenomenon much discussed within the context of the 'Balkan Sprachbund'. Apparently in most of the languages spoken in the Balkan peninsula there has been a sharp decrease in the use of the infinitive. A number of theories have been proposed to explain this phenomenon (see Joseph 1983 for extensive discussion; I will give a very oversimplified view here.) Whatever may have caused the loss of the infinitive to spread from language to language, the development of this change internal to Greek is the clearest, due to the extensive documentation of this language in time.

In CG the infinitive was very productive. According to Joseph (1983) and references cited there, its use started to decrease already from the late Classical period. In Koine the infinitive could be found only in a small number of environments, the finite form of the verb having replaced it in the majority of the constructions in which it appeared in CG. By the 15th century, embedded infinitival complements ceased to appear altogether.

As we saw above, in CG the infinitive had different 'Tense'/Aspect forms, the endings in the active voice being *-ein* (Present/Future), *-(s)si* (First Aorist), *-ein* (Second Aorist), *-enai* (Perfect). By the 12th Century these endings had all merged into *-ein*. Later a loss of word-final *n* which applied to all lexical categories yielded *-ei(n)* as the final suffix of the infinitive. In addition, since about the 7th century [ei] had changed phonetically to [i] , so that the form of the infinitive was [i(n)].

In CG the ending for third person singular in the present was *-ei*. With the changes that the infinitive underwent, it came to be homophonous with the third person singular morphology. Most (if not all) theories agree that the infinitive was reanalyzed as the finite form. Due to the frequency of occurrence of third person in speech, this change spread by analogy to other persons. As a result, in all the environments where the infinitive used to occur, the finite verb replaced it. Again, this is a very rough overview for a detailed discussion of all of the above, see Joseph (1983).

Let's now return to the issue of Nominative Case assignment. IN CG infinitival clauses had Accusative subjects (when the subject was overt):

70.   nomizo ton Socraten ouk aghathon einai
        (I) think Socrates/ACC NEG good be
        'I think that Socrates is not good.'

71.   ton Socraten tafta legin agathon esti
        Socrates/ACC these say good is
        'It is good that Socrates says these things.'

When the infinitive was reanalyzed and replaced by the finite, inflected verb, the latter appeared with (the infinitive's) Accusative subjects. In other words, a verb/INFL that was clearly [+A] appeared unable to assign Nominative Case to its subject:

72.   NP/ACC V/inf ------> NP/ACC V/[+A]

It's possible that this was how [+A] was reanalyzed as not being the element responsible for Nominative case.

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